USER'S MANUAL

Portable PA System

8. TECHNICAL SPECIFICATIONS

Specification \ Model	PA system
Max. Output power	100W
Speaker system	Low: 10” 100W/8ohm
	Hi: 1” 20W/8ohm
SPL	115dB
Frequency response	85Hz - 18kHz ±3dB
THD	< 0.5%
Built-in sound source	CD/MP3 player
Input sensitivity	Mic input: -45dB balanced/unbalanced
	Line input: -10dB unbalanced
	Audio Link IN: -10dB balanced
Controls	Bass tone control: ±10dB at 100Hz
	Treble tone control: ±10dB at 10kHz
	MIC volume control: 0 ~ +10dB
	AUX volume control: 0 ~ +10dB
	MP3/USB/CD volume control: 0 ~ +10dB
	ECHO control: OFF ~ MAX
	SLAVE control: 0 ~ +10dB
Line output	300mV unbalanced
Audio Link OUT	350mV balanced
UHF wireless microphone system	Band: 760 ~ 900MHz
	Wireless microphone model: handhold transmitter or bodypack transmitter
	Max. receiving space: 80m
	Battery for microphone: 9V
Power supply	AC: 110~120V or 220~240V 50/60Hz
	DC: 12V
Built-in rechargeable battery	Operating time: 4 - 5 hours
	Charging time: 10 - 15 hours
Indicators	Power LED
	Bat low LED
	Charging LED
	Wireless receiver: SG LED
Dimension	350mm×350mm×700mm
Net weight	23kg

Note: The features subject to change without prior notice.

IMPORTANT SAFETY SYMBOLS

Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions, which may be sufficient to constitute the risk of electric shock or death.

The symbol is used in the service documentation to indicate that specific component shall be replaced only by the component specified in that documentation for safety reasons.

Protective grounding terminal

~ Alternating current/voltage

Hazardous live terminal

ON: Denotes the apparatus is turned on

OFF: Denotes the apparatus is turned off.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the operator.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

1. IMPORTANT SAFETY INSTRUCTIONS

- **Read these instructions.**
- **Keep these instructions.**
- **Heed all warning.**
- **Follow all instructions.**
- **Water & Moisture**
  The apparatus should be protected from moisture and rain, can not used near water, for example: near bath-tub, kitchen sink or a swimming pool, etc.
- **Heat**
  The apparatus should be located away from the heat source such as radiators, stoves or other appliances that produce heat.
- **Ventilation**
  Do not block areas of ventilation opening. Failure to do could result in fire. Always install accordance with the manufacturer's instructions.
- **Object and Liquid Entry**
  Objects do not fall into and liquids are not spilled into the inside of the apparatus for safety.
- **Power Cord and Plug**
  Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

  Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety.
  If the provided plug does not fit into your outlet, refer to electrician for replacement.
- **Power Supply**
  The apparatus should be connected to the power supply only of the type as marked on the apparatus or described in the manual. Failure to do could result in damage to the product and possibly the user.

  Unplug this apparatus during lightning storms or when unused for long periods of time.

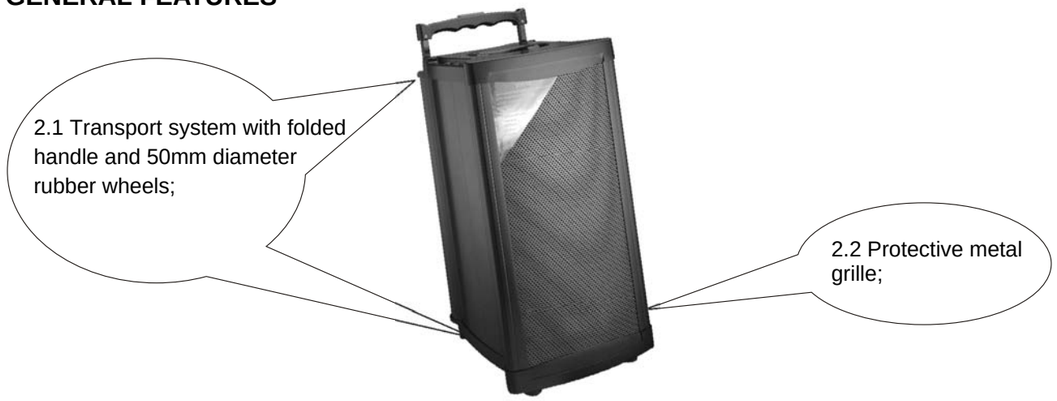
  Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- **Fuse**
  To prevent the risk of fire and damaging the unit, please use only of the recommended fuse type as described in the manual. Before replacing the fuse, make sure the unit turned off and disconnected from the AC outlet.
- **Electrical Connection**
  Improper electrical wiring may invalidate the product warranty.
- **Cleaning**
  Clean only with a dry cloth. Do not use any solvents such as benzol or alcohol.
- **Servicing**
  Do not implement any servicing other than those means described in the manual. Refer all servicing to qualified service personnel only.
- Only use accessories/attachments or parts recommended by the manufacturer.

1. INTRODUCTION

Thank you very much for purchasing this portable PA system. Please read this manual carefully for installation and operation. Please keep this manual well after reading for reference in future. This product is the combination of two-way speaker, amplifier, wireless system and CD(Mp3) /U disk/SD card player. It is ideal for a variety of applications such as public speaking in churches/schools, karaoke, mini- live-show, etc. Its features are as follows:

-. USB interface connected with PC, built-in high quality CD/MP3/U disk/SD card player
-. Built-in dual channel wireless receiver
-. Built-in two-way speaker system (HF: 1" Titanium driver 20W/8ohm - LF: 8" 80W/4ohm)
-. Built-in lighting system for operation in dark environment
-. Advanced amplifier technology
-. Voice priority
-. 2 MIC IN, 2 AUX IN and 2 LINE OUT
-. Audio link output, master/slave control
-. Over load/heat protection
-. AC/DC (battery) power supply, external DC power supply
-. Transport system with two rubber wheels

2. GENERAL FEATURES

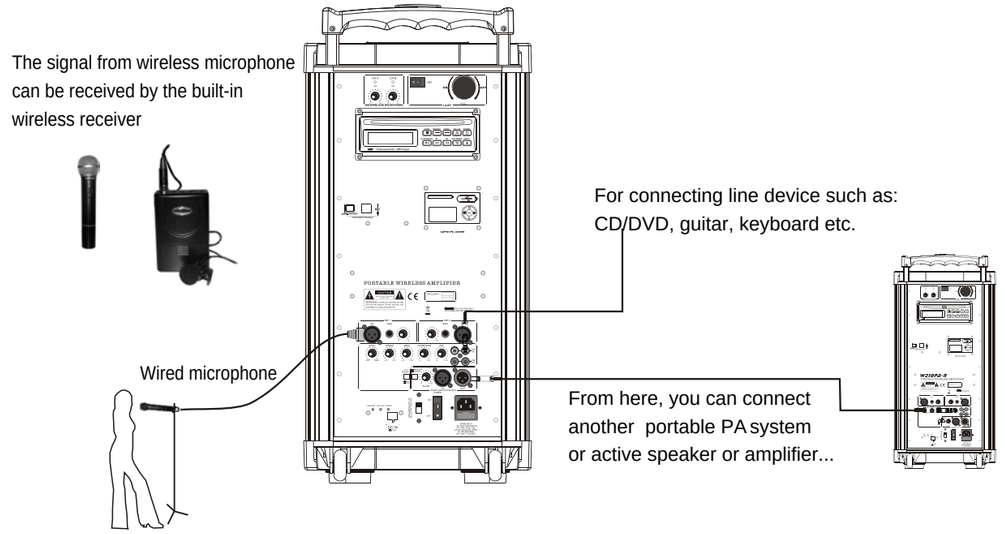


2.3 Compartment for wireless microphone (handhold or bodypack), signal cable, power cord, 9V battery, USB cable, and other accessories;

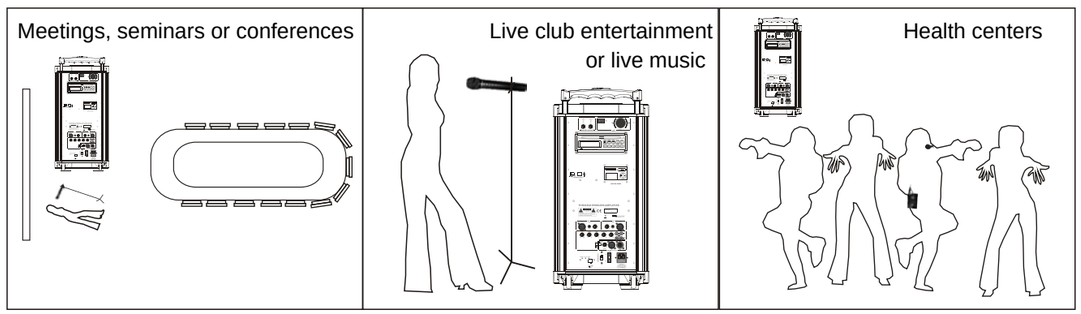
7. APPLICATION

This is an ideal PA system for a variety of live show in church and school, club, large meeting to live reinforce-ment. We designed this PA system to provide two-way high/low speaker for brilliant, natural sound reproduction. Besides, it also provides additional speaker output sockets and AUX input/LINE output sockets to expand your PA system as actual requirement.

Following points help to reach the best effects of the PA system.


The signal from wireless microphone can be received by the built-in wireless receiver
For connecting line device such as: CD/DVD, guitar, keyboard etc.
Wired microphone
From here, you can connect another portable PA system or active speaker or amplifier...

This portable PA system in various applications:

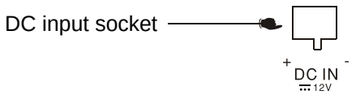


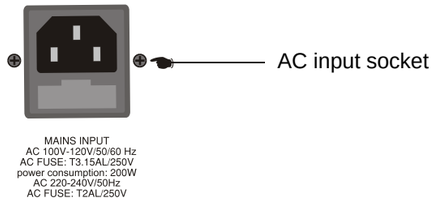
and so on.....

6. INSTALLATION AND CONNECTION

6.1 Mains connection

For ensuring safety, please pay attention to that AC should be the same type as that marked on the rear panel of apparatus, and fuse should be the same type as that marked on the fuse holder. Failure to do so could result in damage to the product and possibly the user. Connect this system with AC through attached power cord, if the provided plug does not fit into your outlet, ask for a qualified technician for replacement. Please unplug this unit during lightning storms or when the unit is unused for long period of times.Furthermore, the unit also provides a DC input socket for connecting external DC power source. If AC power supply fails, 12V DC power will be available to keep the unit working. When AC is switched to DC, it is normal that the unit restart.

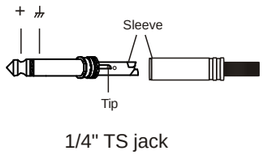




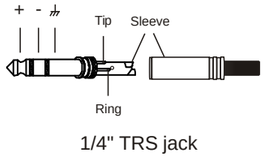
6.2 Audio connection

Only use high quality low-capacitance shielded cable to connect this PA system with other audio device to keep good performance. The portable PA system has balanced XLR connector, unbalanced 6.3Φ jack and RCA socket, and they can be connected in several ways to support various applications without any signal loss.

• For 1/4" phone (6.3Φ) jack

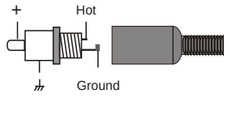


1/4" TS jack
unbalanced input/output



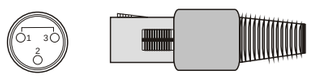
1/4" TRS jack
balanced input/output

• For RCA



• For XLR

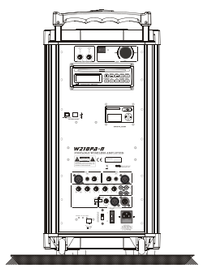
Balanced XLR (1: GND; 2: Hot; 3: Cold)



Unbalanced XLR (1: GND; 2: Hot; 3: Cold/GND)

6.3 Installation

Depends on live application, this portable PA system can be mounted on flat surface or on stand. Please do not place the unit on high temperature devices such as power amplifiers etc. to avoid overheating.



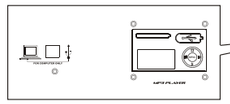
Caution:

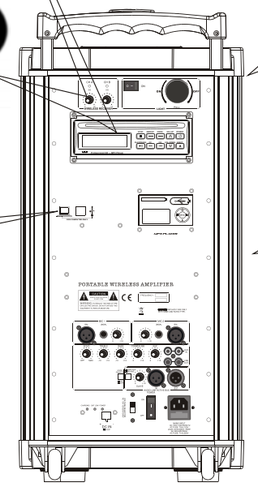
-. Put the stand on a flat, nonskid surface.

-. To make the stand more stable open the feet as wide as possible.

2.4 High quality CD + MP3 player and wireless receiver;

2.5 Lighting system is convenient for operation in dark environment;





2.6 Precise gain control and bass/treble adjustment;

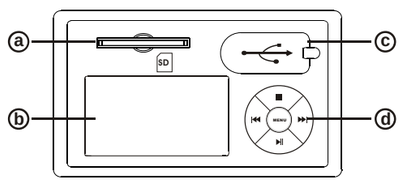
2.7 Groove for stand mounting

3. CONTROL ELEMENT DESCRIPTION

3.1 Integrated player section

This card supports SD/MMC card，U disk, and also supports FAT16/FAT32 document format and MP3 /WMA/WAV/MID music format and external recording.

(1). Description of the panel function



a) SD port
b) LCD screen
c) USB interface
d) Key: ■ stop/upwards
⏮ back/left
⏭ next/right
⏯ pause/downwards
MENU menu/ok/exit

(2). Description of the menu

a) Function:

Volume: adjust the volume

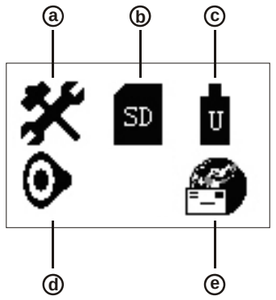
Balance: balance adjustment of the L&R channel

Bass: adjust the bass

Treble: adjust the tremble

Repeat: select the cycle mode

REC_out: storage selection for the REC out



b) SD card play

c) U disk play

d) Record

e) Information on the unit

(3). User's guide

a) Configuration:

- System configuration is achieved in the menu, and press "MENU" to enter.
- Up&down key for the regulation of the parameters.
- Adjust with the left&right key.

b) Instruction for play:

- Plug SD card/U disk (NOTE: First turn off the power).
- select SD card /U disk in the menu, and press "MENU" to enter.
- Select the catalog with the up&down key and the leftwards key for opening.
- Select the song with the L&R key and the up&down key for play and stop.
- Press MENU to return to the catalog selection mode in the stop mode.
- Press MENU to return to the main menu for the system configuration in the play mode.

c) Instruction for record:

- Plug SD card/U disk (NOTE: First turn off the power).
- Select the SD card /U disk in the REC out menu in the system configuration.
- Select the REC in the main menu and press "MENU" to enter.
- Press "pause" for recording and the "stop" for stop recording.

3.2 USB interface

(a). Play MP3 from computer and record the sound from portable PA system

(b). Built-in driving program

(c). After this interface is pluged-in, it can be used immediately.

(d). 16 bit AD-DA conversion

(e). Before operation, connect all the hardware well, and then open the other relevant software. e.g. If you want to use the software WINAMP to play music and use this module to transmit signal, you have to connect all the hardware well and then open the software WINAMP.

5. ACCESSORIES AND OPTIONAL OBJECTS

5.1 Accessories list

The portable PA system provides a multi-function compartment for storing some accessories as follow.
For opening this compartment, you need to depress the case first (1), then pull the box (2), for further details, please refer the sketch map.

☆ Wireless microphone ×2

The system product provides three combination choices of wireless microphone:

2 × handheld transmitter or;

2 × bodypack transmitter or;

1 × handheld transmitter + 1 × bodypack transmitter

☆ Sleeve for wireless microphone

☆ 9V battery × 2

☆ User's manual × 1

☆ Power cord × 1

☆ USB cable × 1

☆ Cable(for DC power supply) × 1

5.2 Optional objects

Furthermore, we also produces some useful auxiliary facilities to matching your system.

☆ Waterproof bag for apparatus

☆ Stand: SDBO21B

Note: please position the stand on a flat surface, and unfold the feet as widely as possible to keep the stand more stable and avoid any apparatus damage.

☆ Stand bag

☆ Signal cable: 10m or 15m or the length determined by customer

Stand: SDBO21B

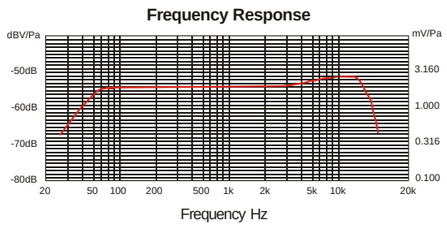
Tote bag

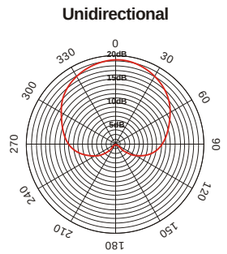
Waterproof bag

Signal cable

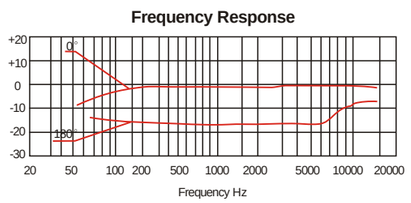
4. WIRELESS MICROPHONE SYSTEM

4.1 Handhold microphone (Dynamic)



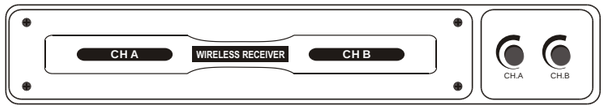


4.2 Bodypack microphone (condenser)



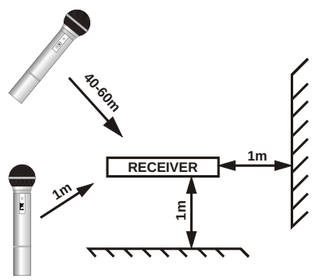
Polarity pattern: Unidirectional
Sensitivity: -50dB±4dB
Impedance: <680ohm

4.3 Non-diversity receiver



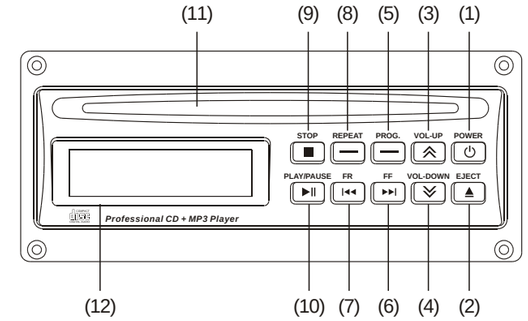
Receiver specification:

Carrier Frequency range	UHF 760-900MHz
Receiving mode	Quatz locked
Frequency Stability	±0.005% / 25℃
Dynamic range	>100dB at 15KHz
Frequency modulation	32.768KHz
Frequency response	50Hz-15KHz ±3dB
RF Sensitivity	3uV (20dB SINAD)
T.H.D	<0.6% at -70dB
S/N	>90dB



Note: In order to make sure the good operation of unit , the equipment should be placed in wide space.

3.3 CD(MP3) player section



(1). POWER button
Turns power on/off the CD/MP3 player.

(2). EJECT button
To eject the audio CD, press this button.

(3). VOL-UP button
Increase the volume.

(4). VOL-DOWN button
Decrease the volume.

(5). PROG. button
Program track number.

(6). FF button (▸▸I)
Go to the next track of audio CD/search forward.

(7). FR button (I◂◂)
Previous track of audio CD/ search back.

(8). REPEAT button
Repeat track. It provides two modes: repeat all and repeat one track.

(9). STOP button
To stop program, press this button.

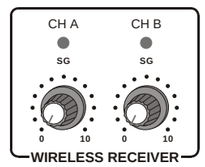
(10). PLAY/PAUSE button
To play and pause of track alternately, press this button.

(11). Disc tray

(12). LCD
Displays important operation messages, for example: No disc: no disc inserted, or disc unreadable.1~ xx: indicates the track number, and track number that is playing will flash on the LCD.

3.4 Wireless receiver section

(14)



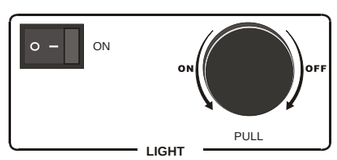
(13)

(13). Volume control
This wireless receiver provides two channels: CHA and CHB. And each channel is equipped with volume control for adjusting the level.

(14). SG LED dispaly
The SG LED lights up when corresponding channel received the signal.
For further details, please refer to the following chapter of WIRELESS MICROPHONE.

3.5 Control section

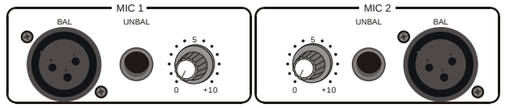
(15)



(16)

(15). LIGHT switch
This switch turns the light on or off.

(16). LIGHT
To illuminate the light, pull it out and turn on the light switch. And the lighting is movable and can be turned.



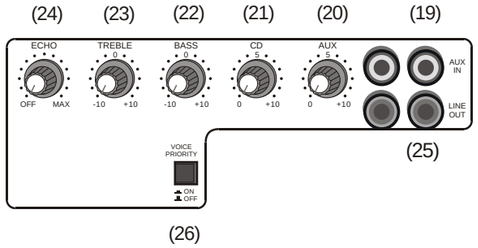
(17) (18)

(17). MIC input
Electronically balanced XLR and unbalanced 6.3Φconnectors, which are designed for the connection of low level signal sources such as low impedance microphones.

(18). MIC control
Adjusts the volume of signal supplied on MIC input connectors, the adjustable range is from 0 to +10dB.

(19). AUX IN
Electronically unbalanced 6.3Φjack, designed for the connection of high level (line) source such as guitar, CD/DVD etc.

(20). AUX control
Adjusts the volume of signal supplied on AUX input connector, the adjustable range is from 0 to +10dB.



(21). CD control
Rotating this control to adjust the amount of tape/CD output volume, the adjustable range is from 0 to +10dB.

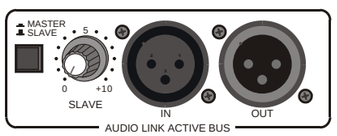
(22). BASS control
Tone control for bass, which is used to boost or attenuate the low frequency by 10dB. When the knob is in the center position (0 scale), the frequency response is flat.

(23). TREBLE control
Tone control for treble, which is used to boost or attenuate the high frequency by 10dB. When the knob is in the center position (0 scale), the frequency response is flat.

(24). ECHO control
Rotating this control to adjust the echo level, clockwise for enhancing and counterclockwise for attenuating. It is valid only for MIC input (included wireless MIC input).

(25). LINE OUT
Electronically unbalanced 6.3Φ jacks, designed for sending the signal came from tape, MIC, AUX IN or wireless receiver to other P series product or amplifier or active speaker. Furthermore, bass/treble and echo controls have no influence on the LINE OUT socket.

(26). VOICE PRIORITY switch
Press this switch to activate the voice priority function, the signal from microphone will be outputted prior to other signal source. Release the switch to invalidate the function.



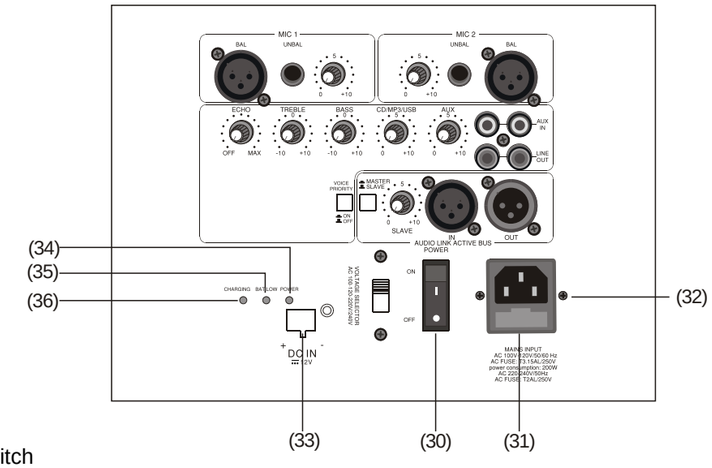
(27) (28) (29)

(27). SLAVE control
When the MASTER/SLAVE (36) switch is depressed, the SLAVE control is used to adjust the volume of signal supplied on link output socket, if release the MASTER/SLAVE switch, the control will be invalid, the signal came from LINK IN will be directly sent to LINK OUT.

(28). LINK IN socket
Electronically balanced XLR input connector, serve to connect the external signal source such as DVD/VCD, CD, or another PA system, etc.

(29). LINK OUT socket
Electronically balanced XLR output connector, output the signal came from LINK IN to another PA system or amplifier system or active speaker.

3.6 Power supply and speaker output section



(30). POWER switch
Turns this apparatus on or off.

(31). Fuse holder
The fuse holder is for containing the fuse, which is a safety device that protects the AC supplies circuits of this apparatus.
Caution: If the fuse blew out, it should be replaced with the same type and specification; if the fuse continues to blow out, please stop using and refer servicing to qualified personnel.

(32). AC power socket
This socket is used to connect the power supply to the unit via enclosed power cord.
Caution: Ensure the source voltage matches for the voltage of product before turning on the unit.

(33). DC IN socket
The unit provides the DC IN socket, which is used to connect external +12Vbattery or other DC source.

(34). POWER LED
This LED lights up when the power switch is turned on.

(35). BAT LOW LED
This LED illumines when the battery power is low, this means the battery need to be recharged up.

(36). RECHARGING LED
This LED twinkles when the battery is being recharged. After the battery is recharged, this LED keeps lighting up.